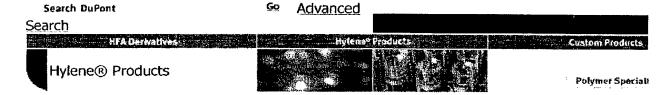
DuPont Polymer Specialties - Hylene TPE 9300C thermoplastic elastomer

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### **DuPont Polymer Specialties**





#### Hylene TPE 9300C

thermoplastic elastomer

Hylene<sup>™</sup> TPE 9300C, a thermoplastic elastomer based on p-phenylene diisocyanate with a polycaprolactone backbone, fills the need for a TPE in very demanding service. Parts made with Hylene<sup>™</sup> 9300C can perform in a wide service temperature range: -29 to 135 C (-20 to 275 F).

In addition, Hylene™ TPE 9300C provides a combination of excellent flex fatigue resistance, cut and tear resistance, and outstanding dynamic properties - all at temperatures higher than conventional TPEs.

#### Uses

Hylene™ TPE 9300C uses include seals and gaskets, nailgun bumpers, jounce bumpers, springs, belts, rollers, wheels and other parts demanding high temperature stability under load, high resiliency, fatigue resistance, and low compression set.

#### **Sales Specifications**

Property	Limit	ASTM Method
Hardness, Shore A	90-96	D2240
Ultimate tensile, psi	6000 min.	D412
Modulus @100% elongation, psi	1600 min.	D412
Ultimate elongation, %	500 min.	D412
Compression set, 70 hr. @100C, %	35 max.	D395B

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custom produc

Download the TPE 9300C probulletin for addinformation

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Bashore resilience, %	50 min.	D2632
Specific gravity	1.16- 1.20	D792

#### **Processing Guidelines**

Hylene™ TPE 9300C is supplied as extruded pellets, with a processing temperature range of 227 to 249?C (440 to 480?F). Cycle times are typically 25-50% shorter than for standard TPEs because of the high crystallization rate. For full property development, the molded part must be annealed for 16 hours at 121?C (250?F) and aged at room temperature for approximately two weeks after annealing. For additional information, request the DuPont bulletin Hylene™ TPE Processing Guidelines and Handling Precautions.

#### **Packages**

Hylene™ TPE 9300C is supplied as extruded pellets in 250-lb (113.4 kg) and 40-lb (18.14 kg) net fiber drums. Samples of 1 lb are also available

#### **Typical Physical Properties**

Property	Value
Hardness, Shore A	94
Modulus at 100% Elongation, psi (MPa)	1900 (13.1)
Ultimate Tensile Strength, psi (MPa)	8500 (58.6)
Ultimate Elongation, %	600
Specific Gravity	1.19
Rebound Resilience, %	64
Service Temperature Range, ?C (?F)*	-29 to 135 (-20 to 275)
Compression Set, % (ASTM D395B)	
70 hr at 70?C (158?F)	16.7
70 hr at 100?C (212?F) 70 hr at 125?C (257?F)	31.0 60.0
Tear Strength-Die C, pli (kN/m) (ASTM D624-54) Taber Abrasion,** mg lost/1000 cycles (ASTM D3389)	860 (155) 28
Water Absorption, %	~1
Thermal Coefficient of Expansion, cm/cm, 23-120?C (73-248?F)	29 x 10-5
Thermal Conductivity, W/mK	0.21

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- \* Service temperature varies depending upon environment and dynamics of the application.
- \*\* Wheel: 1000 g; CS-10F

#### Hazards

Hylene $^{\text{TM}}$  TPE 9300C is a stable thermoplastic elastomer, with no significant toxicity. See the DuPont MSDS for this material for further information.

#### **Contact Us**

Contact us to place an order, request a sample, or for additional on this or other grades of Hylene $^{TM}$  TPE.

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SCI.POLYMERS - Guide to Polymer Abbreviations

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# Guide to Polymer Abbreviations

Last-modified: March 3rd, 1998

Since polymer molecules tend to have long names befitting their size, most polymers are referred to in coversation and in print by their abbreviations, whenever possible. It is much easier to refer to 'ABS' than to 'acrylonitrile-butadiene styrene. or to 'PCTFE' instead of 'polymonochlorotrifluoroethylene'.

Polymer Name
acrylonitrile-butadiene acrylate
acrylonitrile-butadiene styrene terpolymer
acrylonitrile-chlorinated polyethylene styrene terpolymer
acrylate maleic anhydride terpolymer
acrylonitrile-methyl methacrylate
amorphous polyolefin
acrylonitrile styrene copolymer
acrylonitrile styrene acrylate
bulk molding compound
bis maleimide
cellulose acetate
cellulose acetate butyrate
cellulose acetate proprionate
cellulose nitrate (celluloid)
cycloolefin copolymer

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## SCI.POLYMERS - Guide to Polymer Abbreviations

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SVA	styrene vinyl acrylonitrile
-Т-	
TEO	thermoplastic elastic olefin
TPE	thermoplastic elastomer
TPE-O, TPO	thermoplastic elastomer - olefinic
TPE-S	thermoplastic elastomer - styrenic
ТМС	thick molding compound
TPU	thermoplastic urethane
TVO	thermoplastic vulcanites
- U -	
UF	urea formaldehyde
UHMWPE	ultrahigh molecular weight polyethylene
ULDPE	ultra low density polyethylene
UP,UPE	unsaturated polyester (thermoset)
- V -	
VA	vinyl acetate
VAE	vinyl acetate ethylene
VLDPE	very low density polyethylene
- X -	·
XPS	expandable polystyrene

SCI-Polymers FAQ | Polymer Tradenames | Mutual Links Go to the Main Menu of <u>The Other Pages</u>

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